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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,404	02/10/2004	Jin-gyo Seo	1293.1076-DC	9836

49455 7590 05/05/2005

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EXAMINER

BATTAGLIA, MICHAEL V

ART UNIT	PAPER NUMBER
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2652

DATE MAILED: 05/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/774,404	Applicant(s) SEO ET AL.	
	Examiner Michael V Battaglia	Art Unit 2652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/359,128.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Priority

1. United States application 10/774,404 is a continuation of United States application 09/609,822, which is a divisional of United States application 09/359,128 filed on July 23, 1999. Applicant's claim for priority under 35 U.S.C. 119(a)-(d) is partially based upon an applications filed in Korea on February 11, 1998 and December 30, 1997. A claim for priority under 35 U.S.C. 119(a)-(d) cannot be based on said applications, since the United States application was filed more than twelve months thereafter. The priority date for application 10/774,404 is therefore July 23, 1998 based on the filing date of Korean application 98-29732. It is noted that the July 23, 1998 priority date has been perfected by the translation filed on September 22, 2004 in application 09/609,822.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 2 and 4 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 8 and 21 (hereafter C1, C8 and C21 respectively) of U.S. Patent No. 6,631,110. Although the conflicting claims are not identical, they are not patentably distinct from each other for the reasons below. It is noted that line numbers

referenced in the double patenting rejections below refer to the claim's line numbers and not the line numbers of the columns on which the claims are written.

In regard to claim 1, C1 discloses an adaptive writing method of writing input data on a recording medium using a write pulse waveform including a first pulse, a last pulse and a multi-pulse train (lines 1-4), comprising: controlling the write pulse waveform based on a grouping table having width data of the first and/or last pulses of the write pulse waveform to generate an adaptive write pulse waveform (lines 5 and 8-11); and writing input data on the recording medium using the adaptive write pulse waveform (lines 12-13).

In regard to claim 2, C21 includes all the limitations of C1 and discloses that the grouping table includes grouping markers associated with a magnitude of a present mark and magnitudes of leading and/or trailing spaces of the present mark (lines 2-6).

In regard to claim 4, C8, which is dependent on C1 and includes all the limitations thereof, discloses an adaptive writing method of writing input data on a recording medium using a write pulse waveform including a first pulse, a last pulse and a multi-pulse train (lines 1-4 of C1), comprising: controlling the write pulse waveform based on a grouping table having width data of the first and/or last pulses of the write pulse waveform to generate an adaptive write pulse waveform (lines 5 and 8-11 of C1); and writing input data on the recording medium using the adaptive write pulse waveform (lines 12-13 of C1), wherein the adaptive write pulse waveform is based on whether the input data is written in a land track or a groove track (lines 2-4 of C8).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 2 are rejected under 35 U.S.C. 102(e) as being anticipated by Hara (US 6,044,055).

In regard to claim 1, Hara discloses an adaptive writing method of writing input data on a recording medium using a write pulse waveform including a first pulse, a last pulse and a multi-pulse train (Fig. 12), comprising: controlling the write pulse waveform based on a grouping table (Fig. 7, element 15) having width data of the first and/or last pulses of the write pulse waveform to generate an adaptive write pulse waveform (Fig. 12 and Col. 16, lines 40-44); and writing input data on the recording medium using the adaptive write pulse waveform (Col. 7, lines 25-36). It is noted that the claimed "grouping table" reads on the RAM of Fig. 7, element 15 of Hara because all sequences having the same AA[11:8] and AA[3:0] are grouped together as a particular "arrangement of modulated data" (Fig. 7; Col. 12, lines 10-17; and Col. 16, lines 40-44).

In regard to claim 2, Hara discloses that the grouping table includes grouping markers associated with a magnitude of a present mark and magnitudes of leading and/or trailing spaces of the present mark (Col. 10, lines 62-67; Col. 12, lines 26-31; and Col. 16, lines 40-44). It is noted that the claimed "grouping markers" read on the addresses of the grouping table that store compensation information for the particular arrangements of modulated data and are selected by AA[11:8] and AA[3:0] (Col. 12, lines 10-17; and Col. 16, lines 40-44).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hara in view of Dil (US 4,423,502).

Hara discloses an adaptive writing method of writing input data on a recording medium using a write pulse waveform including a first pulse, a last pulse and a multi-pulse train (Fig. 12), comprising: controlling the write pulse waveform based on a grouping table (Fig. 7, element 15) having width data of the first and/or last pulses of the write pulse waveform based on a magnitude of a present mark of input data and magnitudes of leading and/or trailing spaces of the present mark to generate an adaptive write pulse waveform (Col. 10, lines 62-67; Col. 12, lines 26-31; and Col.16, lines 40-44); and writing the input data on the optical recording medium using the adaptive write pulse waveform (Col. 7, lines 25-36), wherein the adaptive write pulse waveform is different between respective zones of the recording medium (Col. 10, lines 39-47 and Col. 16, lines 40-44) and the input data is written in a track on the recording medium (Col. 7, lines 46-55). It is noted that the claimed "grouping table" reads on the RAM of Fig. 7, element 15 of Hara because all sequences having the same AA[11:8] and AA[3:0] are grouped together as a particular "arrangement of modulated data" (Fig. 7; Col. 12, lines 10-17; and Col. 16, lines 40-44). Hara does not specify whether the track on the recording medium on which the input data is written is a land track or groove track.

Dil discloses a recording medium having land tracks and groove tracks so that adjacent tracks are situated at different parallel planes to reduce crosstalk from neighboring tracks and to permit a substantial increase in information density (Abstract of Dil).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made for the recording medium of Hara to have land and groove tracks as suggested by Dil, the motivation being for adjacent tracks of Hara to be situated at different parallel planes to reduce crosstalk from neighboring tracks and to permit a substantial increase in information density. It is noted that in the track of Hara on which the input data is written would then be a land track or a groove track.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hara in view of Nishiuchi et al (hereafter Nishiuchi) (US 5,568,461).

Hara discloses an adaptive writing method of writing input data on a recording medium using a write pulse waveform including a first pulse, a last pulse and a multi-pulse train (Fig. 12), comprising: controlling the write pulse waveform based on a grouping table (Fig. 7, element 15) having width data of the first and/or last pulses of the write pulse waveform to generate an adaptive write pulse waveform (Fig. 12 and Col. 16, lines 40-44); and writing input data on the recording medium using the adaptive write pulse waveform (Col. 7, lines 25-36). It is noted that the claimed "grouping table" reads on the RAM of Fig. 7, element 15 of Hara because all sequences having the same AA[11:8] and AA[3:0] are grouped together as a particular "arrangement of modulated data" (Fig. 7; Col. 12, lines 10-17; and Col. 16, lines 40-44). Hara does not disclose that the adaptive write pulse waveform is based on whether the input data is written in a land track or a groove track.

Nishiuchi discloses an adaptive writing method that optimizes write pulse waveforms for either a land track and a groove track (Col. 14, lines 7-13) and teaches that using recording signals

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optimized for writing on a land or a groove will reduce error that is generated when the same recording signal is used for both lands and a grooves (Col. 2, lines 35-39 and Col. 6, lines 36-53).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made for adaptive write pulse waveform of Hara to be optimized based on whether the input data is written in a land track or a groove track as suggested by Nishiuchi, the motivation being to reduce error caused by writing to both land and groove tracks in the same manner.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael V Battaglia whose telephone number is (571) 272-7568. The examiner can normally be reached on 5-4/9 Plan with 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T Nguyen can be reached on (571) 272-7579. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael Battaglia



BRIAN E. MILLER
PRIMARY EXAMINER